

Species of Concern	Change	Primary Cause
White-footed Vole	- Loss of natural alder riparian areas	- Timber harvest methods - Inadequate riparian buffers
Big Game	- Human harassment and poaching - Loss of thermal and hiding cover - Loss of calving areas	- Construction of roads and spurs - Timber harvest - "
All species	- Loss of vegetative & structural diversity	- Planting Douglas-fir monocultures, PCT, brush/hardwood removal

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## CHAPTER 8: SPECIES and HABITAT - BOTANY

### CHARACTERIZATION

**Special Status Plants and Habitats:** There are no known occurrences of special status plants (including Survey and Manage strategy 1 & 2 species) in this subwatershed. For populations and/or habitats of special status plants that may occur in the subwatershed, see Table BOT-1 In the

appendices.

Many special status plants occur on rock outcrops, oak woodlands, or savannas. These habitats are usually found in areas of thin soil where trees have difficulty becoming established. Although there are many oak woodlands and savannas throughout the subwatershed, most of them are located in the lower elevations where agriculture and other uses have had a significant effect on their species composition. Some special status plants grow in dry site Douglas-fir forests with an open canopy. This habitat occurs on the ridges north of Mehl Creek and the rock outcrops in the subwatershed.

This subwatershed has a handful of small farm ponds that were identified from aerial photos. These are mostly on the eastern side of the subwatershed and are entirely on private ground. It is likely that the ponds provide habitat for aquatic plants, both native and exotic. *Wolffia columbiana* is the only special status plant that may be associated with these ponds.

#### **CURRENT CONDITIONS**

Special habitats in this subwatershed have been defined by both prehistoric and historic uses of the land. The dry forest/oak woodland identified on the ridges north of Mehl Creek shows some evidence of fire many years ago. This area likely was routinely burned, as evidenced by the presence of both California black oak (*Quercus kelloggii*) and Oregon white oak (*Quercus garryana*), which are well adapted for frequent fires. Following pioneer settlement, these woodlands were probably maintained by grazing and burning, until the practice was discontinued in the 1950's. Since that time, aerial photos have indicated these woodlands were progressively encroached upon by conifers, and now only the rock outcrops and thinly soiled areas remain as oak woodlands. It is unknown if these oak woodlands will continue to decrease in size.

The Mehl Creek oak woodlands include both native and exotic grass species. Hedgehog dogtail (*Cynosurus echinatus*), a prolific weedy grass, is common in the more exposed areas, with the native blue wildrye (*Elymus glaucus*) occurring where there is partial shade. These woodlands would be a good place to collect native grass seed for cultivation.

#### **REFERENCE CONDITIONS**

It is unknown what the historic abundance and distribution of special status plants were within the subwatershed. Habitat trends would indicate that there has been a loss of habitat for some species due to the differences between historic and prehistoric human habitation and resource utilization patterns. A reference condition of dry forest/oak woodland special habitat type is found in the N½ N½ Sect. 14, T.23 S., R.8W., and in S ½ Sect. 15, T.23S., R.8W. This area is in the LSR. There is no savanna special habitat type on BLM.

#### **SYNTHESIS AND INTERPRETATION**

The oak woodland/savanna habitat has greatly decreased in the last four decades. Some have been plowed, planted, grazed and/or converted to homesites. Changes in the way in which fire is managed in the subwatershed has also effected the vegetation pattern. In the absence of fire, some oak woodlands and savannas have converted to coniferous forest. Existing oak woodlands have been invaded with hedgehog dogtail grass, a European species that has overtaken open areas in most of the Coos Bay District's oak woodlands. This grass was probably introduced into the watershed in erosion control or pasture seed mixes.

Some of the dry forest special habitat type is in a natural condition. Changes that have altered this habitat include logging on private and public lands. The managed plantations that have resulted from the reforestation of harvest units may develop differently than an unmanaged stand.

There is a strong probability that noxious weeds and management practices could alter the vegetative composition of dry forest plantations in early to mid seral stages. Oak woodlands may not recover from the invasion of noxious weeds without intervention. See Noxious Weed section for a discussion of control strategies.

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## CHAPTER 9: SPECIES and HABITAT - NOXIOUS WEEDS

### CHARACTERIZATION

This subwatershed, as well as adjacent subwatersheds, have major invasions of noxious weeds. Scotch broom (*Cytisus scoparius*) is by far the most prolific and abundant noxious weed in the subwatershed. Most of the occurrences are along roads, in clearcuts, and in abandoned fields. Many of the dense populations of broom can be seen on aerial photos.

The Upper Middle Umpqua also has some roadside populations of meadow knapweed (*Centaurea pratensis*). These populations are mostly at lower elevations, along Sawyer Creek Road, Maupin County Road, and Mehl Creek. This species is not common in the Coos Bay District, and is found only on the eastern side of the district.

There are also scattered plants of bull thistle (*Cirsium vulgare*), Canadian thistle (*Cirsium arvense*), St. John's wort (*Hypericum perforatum*), tansy ragwort (*Senecio jacobea*), and poison-hemlock (*Conium maculatum*) throughout the watershed, mostly along roads. These species are common in the Coos Bay District, but pose less of a threat to native plants than other weedy species.

Purple loosestrife (*Lythrum salicaria*) is not known to be present in the subwatershed at this time. However, wide, marshy flood plains and back channels provide a favorable habitat. Once established, purple loosestrife will choke backwaters and marshes, reducing habitat for native aquatic and marshland plants and reducing fish habitat. If purple loosestrife is introduced to the watershed, it will probably occur on private land, as there doesn't appear to be any habitat for this plant on BLM controlled land.

### CURRENT CONDITIONS

Noxious weeds are a threat to native plant diversity and native animal survival. These species originate from other continents and are able to displace and out compete native species because they arrive without the host of predators, disease, and other ecosystem components that limit their abundance in their homeland. The result can be several acres of monotypic habitat, devoid of many of the features, such as nesting, perching, and cavity habitat, of a native plant community. Noxious weeds also reduce the quality and quantity of forage available for animals because many of these weeds are toxic or otherwise unpalatable.

Scotch broom is found throughout the watershed, on both public and private land. The largest, most dense areas of invasion occur on private land in abandoned fields. There are heavy populations of the

weed on the northern end of the watershed in T. 22 S., R. 8 W., Sections 14, 15 & 16, and on the eastern leg of the watershed in T. 23 S., R. 7 W., Sections 8, 9, 17, 18, & 19. In the remainder of the analysis area, broom is mostly concentrated along roads and in young Douglas-fir plantations.

Broom plants growing in plantations and along roads are sometimes controlled by manual maintenance or herbicide application. Manual maintenance does not always eliminate all of the broom in a plantation. Often, pockets of broom are left uncut where there are no trees to release. After the Douglas-fir grow tall enough to shade the Scotch broom, it is considerably reduced in vigor or dies. Roadside broom usually receives enough sunlight to remain in a vegetative state.

Roadside broom is a matter of some concern, especially where it has been allowed to crowd the road enough to impede the passage of vehicles. In this case, seeds become lodged in vehicles, allowing for transport to uninfected areas. Douglas County has applied herbicides to the broom on private lands along Henderer County Road and Mehl Creek County Road.

#### **REFERENCE CONDITIONS**

Scotch broom was first introduced into Oregon in the 1930's, but probably didn't spread to this watershed until the 1950's. Since that time, this subwatershed has been so heavily invaded by scotch broom that it is difficult to locate land to be used as a reference condition. The area that appears to have the least amount of broom is T. 23 S., R. 8 W., Sec. 21, in the Late-Successional Reserve. This section has several age classes, encompassing all seral stages. Most of the roads within the section have few roadside infestations of broom.

#### **SYNTHESIS AND INTERPRETATION**

The shift from native plant communities to noxious weeds can negatively impact the environment, causing death or evacuation of portions of the food web.

Many factors contribute to the invasion of noxious weeds. Ground disturbance predisposes forest land to invasion. Timber harvest and road building introduces seeds from other areas, while at the same time, creating the soil disturbance which invites quick-colonizing nonnative species. Seeds may be carried in by vehicles, logging equipment, or as contaminants in erosion control and forage seed mixtures, fill material and gravel. The increased light found along roadsides allow roads to serve as corridors for weed invasion. Once established, many weed species are dispersed by wind-blown seed and invade other open, disturbed sites.

In agricultural areas, weeds are often introduced in straw, hay, or seed mixtures. These weeds are spread by animal hooves, fur and other dispersal methods. Birds and other animals may also spread nonnative plants by ingestion, or by seed temporarily adhering to their bodies. Some noxious weeds, such as Scotch broom and purple loosestrife, have aesthetic value to gardeners, and are introduced into an area by spreading from flower gardens.

Prevention of the introduction of noxious weed species (or detections and eradication before they spread from initial points of infestation) is the most time and cost-effective method of control. Noxious weeds need immediate treatment upon discovery to enable eradication. When populations become established, they can no longer be eradicated. If epidemic proportions are reached, then prevention of further spread from existing sites is the only feasible option.

Eradication/control can be accomplished through mechanical, biological, chemical suppression, and/or re-vegetation. Each of these methods of control can have potentially severe impacts to the environment. Therefore, knowing each weeds physiology is imperative for maximum benefit and minimum impacts. Currently, natural re-vegetation, mechanical, and chemical treatments are the best methods for eradication. While biological control has great appeal, the cost of developing and the unknown consequences of introducing another nonnative species to the ecosystem currently makes this an epidemic control method.

Most of the noxious weed species in this subwatershed will ultimately be controlled by canopy closure and light deprivation inside plantations, as these are early seral species. An exception is Scotch broom, as its seed remains viable in the soil for about 80 years. Therefore, Scotch broom may be perpetuated on forest land where rotations are less than 80 years when plants are allowed to produce seed. Once broom is established, road construction and maintenance will likely provide the disturbances necessary for regeneration of noxious weed species.

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## **CHAPTER 10: HUMAN USES: HISTORIC / PREHISTORIC**

### **REFERENCE CONDITIONS**

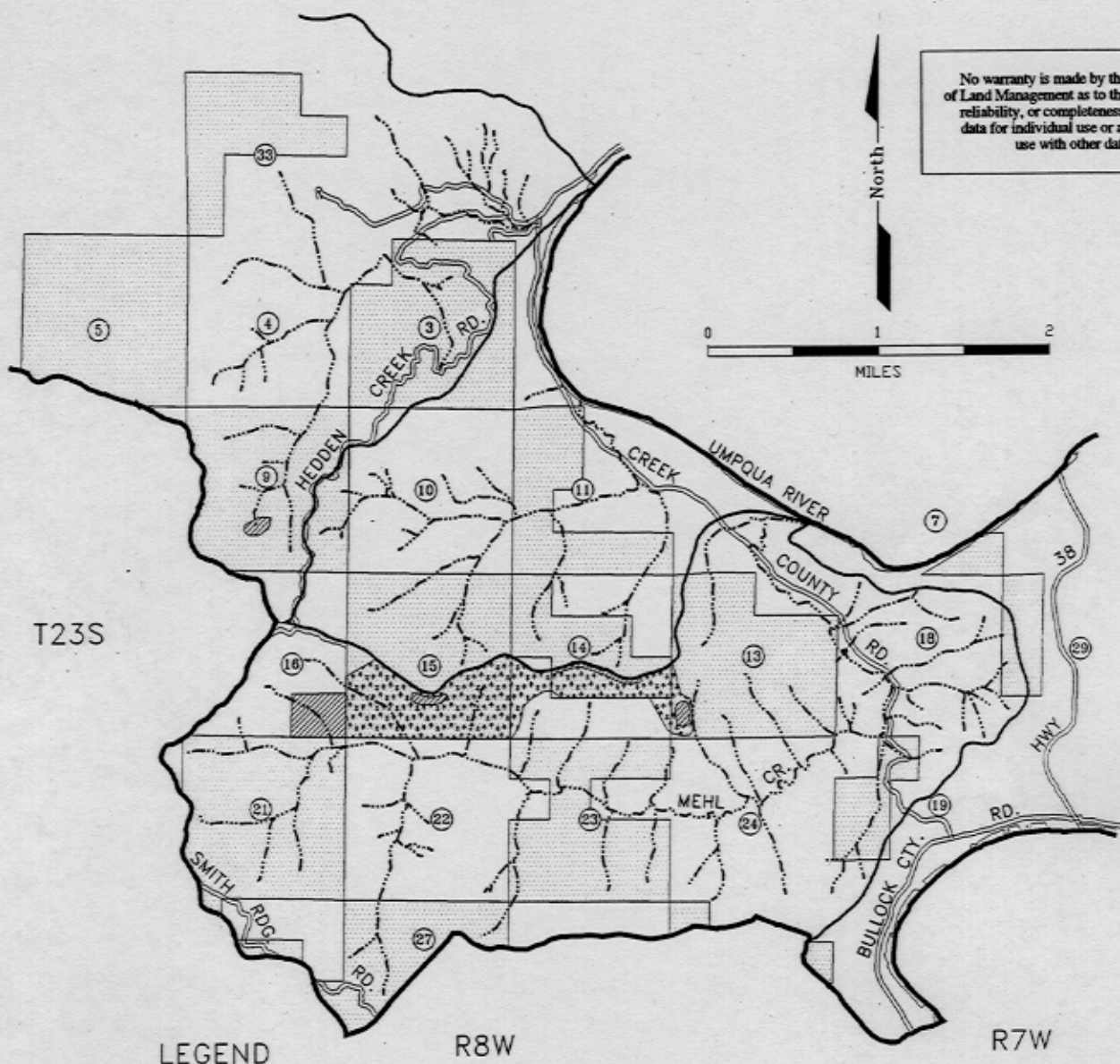
The Umpqua River now is a major transportation corridor cutting through the Coast Range mountains, and probably has been for as long as people have lived in the region. It also is probable that the portion of that corridor within the Upper Middle Umpqua Subwatershed was occupied prehistorically. The wide river terraces which later drew ranchers and farmers to this area also would have been appealing to prehistoric peoples.

Our best knowledge about mid-19th century Native American territories suggests the Umpqua Indians resided along the main stem of the river. Lower Umpqua Indians territory included the area within tidal influence, from the river mouth near Winchester Bay to the vicinity of Scottsburg. Upper Umpqua Indian territory began there and continued upriver to the meeting of the North and South Forks, near Coles Valley. The Yoncalla Indians occupied the watersheds formed by Elk and Calapouya Creeks, to the north and east of the Upper Umpqua territory.

While the Lower Umpqua focused on marine resources, the Upper Umpqua depended on a wide variety of subsistence activities during the year. The hunted for deer and elk, fished the river for salmon and freshwater species, and gathered foods like camas (a root crop). Undoubtedly, areas within the subwatershed were used in their subsistence activities. However, relatively little is known about prehistoric land use patterns among the Upper Umpqua. This is in part due to the devastation and changes caused by the epidemic of fevers which spread throughout the Native American populations of the vicinity during 1830-32.

In November 1854, Indian Superintendent Joel Palmer signed a treaty with the Umpqua and Yoncalla Indians. This ratified treaty granted to the United States all of their lands, including those in the subwatershed. The Native peoples first were moved away from the area to a nearby reservation created in lower Coles Valley. Within a year, turmoil between the Euro-Americans and the Indians along the Rogue River and the southwest Coast escalated into open warfare. By February 1856, this reservation had been closed and more than 300 Umpqua and Yoncalla Indians were moved to the

# SPECIAL STATUS HABITATS OF UPPER MIDDLE UMPQUA SUBWATERSHED



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LEGEND

R8W

R7W

- BLM ADMINISTERED LANDS
- DRAINAGE BOUNDARY
- STREAM
- DRY FOREST/OAK WOODLAND
- ROCK OUTCROP/ PRAIRIE

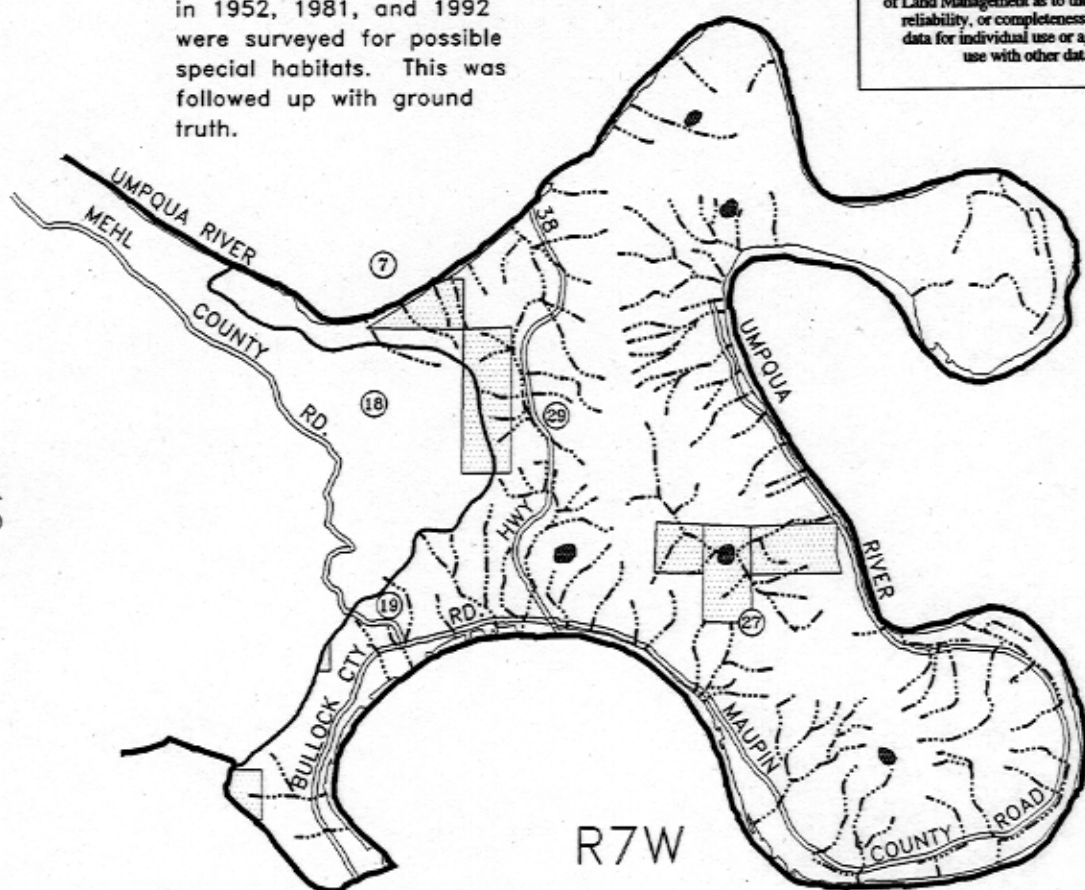
DATA COLLECTION METHOD:  
Aerial photographs taken in 1952, 1981, and 1992 were surveyed for possible special habitats. This was followed up with ground truth.

# *SPECIAL STATUS HABITATS OF UPPER MIDDLE UMPQUA SUBWATERSHED*





DATA COLLECTION METHOD:  
Aerial photographs taken  
in 1952, 1981, and 1992  
were surveyed for possible  
special habitats. This was  
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truth.

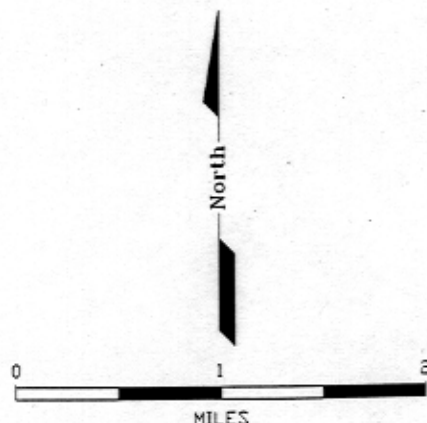
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reliability, or completeness of these  
data for individual use or aggregate  
use with other data

T23S



## LEGEND

-  BLM ADMINISTERED LANDS
-  SUBBASIN BOUNDARY
-  STREAM
-  POND

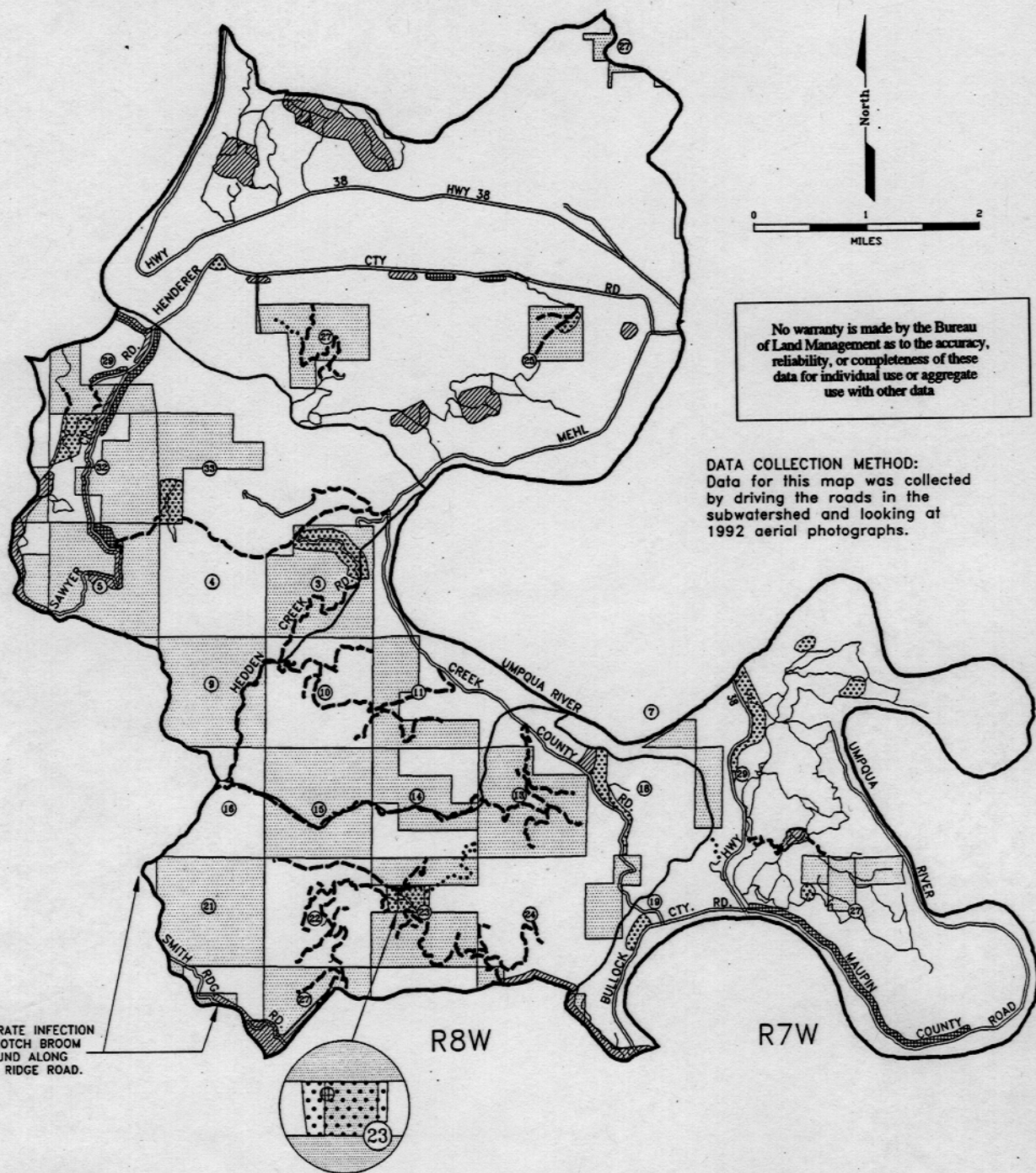




T22S

T23S

NOTE: MODERATE INFECTION  
OF SCOTCH BROOM  
IS FOUND ALONG  
SMITH RIDGE ROAD.



## LEGEND

- BLM ADMINISTERED LANDS
- MEADOW KNAPWOOD
- SCOTCH BROOM—MODERATE INFECTION
- SCOTCH BROOM—HEAVY INFECTION
- DRAINAGE BOUNDARY
- STREAM
- SCOTCH BROOM—MODERATE ROADSIDE INFECTION
- SCOTCH BROOM—HEAVY ROADSIDE INFECTION

NOXIOUS WEED LOCATIONS  
OF  
UPPER MIDDLE UMPQUA  
SUBWATERSHED



## APPENDIX: BOT-I

The following list was compiled from the 1995 issue of "Rare, Threatened and Endangered Plants and Animals of Oregon", a compilation of species produced by the Oregon Natural Heritage Program. Consideration was given to known locations, range and habitat requirements when determining the probability of occurrence.

### Special status plants which may occur in the Upper Middle Fork Watershed

Species	Common name	Status	Probability
<i>Adiantum jordanii</i>	California. maidenhair fern	Review species	medium
<i>Ammannia robusta</i>	ammannia	Review species	low
<i>Arctostaphylos hispidula</i>	Howell's manzanita	Assessment species	low
<i>Aster vialis</i>	wayside aster	Species of Concern	High
<i>Astragalus umbraticus</i>	woodland milk-vetch	Tracking species	medium
<i>Cimicifuga elata</i>	tall bugbane	Species of Concern	high
<i>Calochortus umpquaensis</i>	Umpqua mariposa-lily	Candidate	low
<i>Camissonia ovata</i>	golden eggs	Review species	medium
<i>Carex brevicaulis</i>	short stemmed sedge	Review species	medium
<i>Cicendia quadrangularis</i>	timwort	Assessment species	low
<i>Dichelostemma ida-maia</i>	firecracker flower	Tracking species	high
<i>Epilobium oreganum</i>	Oregon willow-herb	Species of Concern	low
<i>Erythronium revolutum</i>	coast fawn lily	Tracking species	low
<i>Eschscholzia caepitosa</i>	gold poppy	Assessment species	low
<i>Festuca elmeri</i>	Elmer's fescue	Review species	medium
<i>Helianthella californica</i> var. nev.	California helianthella	Review species	medium
<i>Limnanthes gracilis</i> var. <i>gracilis</i>	slender meadowfoam	Species of Concern	low
<i>Linanthus bolanderi</i>	Baker's linanthus	Review species	medium
<i>Lupinus sulphureus</i> ssp. <i>kincaidii</i>	Kincaid's lupine	Species of Concern	medium
<i>Mimulus douglasii</i>	Douglas' monkeyflower	Tracking species	high

Species	Common name	Status	Probability
<i>Mimulus pulsiferae</i>	candelabrum monkeyflower	Tracking species	medium
<i>Minuartia californica</i>	California sandwort	Tracking species	medium
<i>Montia diffusa</i>	branching montia	Tracking species	medium
<i>Navarretia tagetina</i>	marigold navarretia	Review species	low
<i>Ophioglossum pusillum</i>	adder's-tongue	Assessment species	medium
<i>Pellaea andromedifolia</i>	coffee fern	Assessment species	low
<i>Phacelia verna</i>	spring phacelia	Tracking species	high
<i>Polystichum californicum</i>	California swordfern	Assessment species	low
<i>Romanzoffia thompsoni</i>	Thompson's mistmaiden	Species of Concern	low
<i>Scirpus subterminalis</i>	water bulrush	Review species	low
<i>Sidalcea cusickii</i>	Cusick's checkermallow	Tracking species	high
<i>Sisyrinchium hitchcockii</i>	Hitchcock's blue-eyed grass	Species of Concern	low
<i>Verbena hastata</i>	blue verbena	Review species	low
<i>Wolffia columbiana</i>	Columbia watermeal	Assessment species	low
<i>Funaria muhlenbergii</i>	moss	Assessment species	low
<i>Racomitrium pacificum</i>	moss	Assessment species	low
<i>Tripterocladium leucocladulum</i>	moss	Species of Concern	low